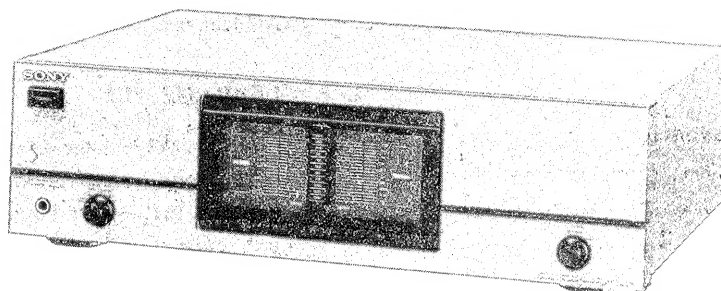


TA-N721

SERVICE MANUAL

*US Model
Canadian Model
E Model*



SPECIFICATIONS

AUDIO POWER SPECIFICATIONS POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

**With 8-ohm loads, both channels driven,
from 20 - 20,000 Hz; rated 135 watts per
channel minimum RMS power, with less
than 0.9% total harmonic distortion from
250 milliwatts to rated output.**

Amplifier section

Power bandwidth (IHF)
7 Hz - 30 kHz (8 ohms)
Overall output (1 kHz)
135 W + 135 W (front, at rear/center
off at 8 ohms)
25 W + 25 W (rear, at front/center off at 8 ohms)
50 W (center, at front/rear off at 4 ohms)
Harmonic distortion
Less than 0.9% (at 1 kHz, 8 ohms loads,
front: 135 W + 135 W, rear/center off)
Intermodulation (IM) distortion (60 Hz : 7 kHz)
Less than 0.9 % at rated output
Frequency response
INPUT (FRONT/REAR/CENTER):
10 Hz - 70 kHz ± 3 dB
Input sensitivity 1 V (50 kilohms)
Damping factor 40 (8 ohms, 1 kHz)
Signal-to-noise ratio 115 dB
Output
FRONT SPEAKER and REAR SPEAKER:
Accepts speakers of 8 - 16 ohms.
CENTER SPEAKER:
Accepts speaker of 4 - 16 ohms
HEADPHONES:
Accepts low and high impedance
headphones.

General

Power requirements
US, Canadian Model : 120V AC, 60Hz
E Model : 120/220/240 V AC, 50/60Hz
Power consumption
US Model : 250W
E Model : 265W
Dimensions Approx. 430 x 130 x 345 mm (w/h/d)
(17 x 5 $\frac{1}{8}$ x 13 $\frac{3}{8}$ inches)
(including projecting parts and controls)
Weight Approx. 9.5 kg (20 lb 15 oz)

Design and specifications are subject to change without notice.

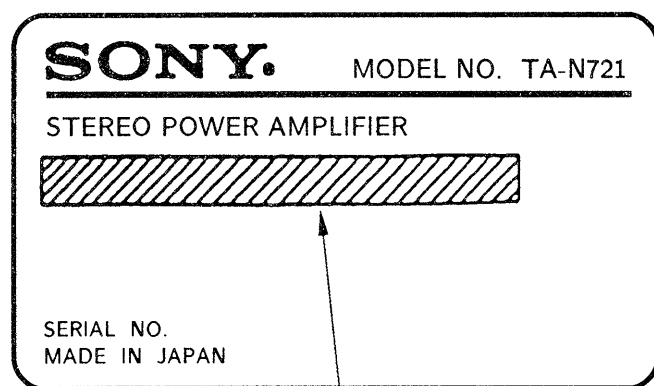
AV POWER AMPLIFIER
SONY®

TABLE OF CONTENTS

Section	Title	Page
1. GENERAL	3
2. ELECTRICAL MEASUREMENTS	5
3. DIAGRAMS		
3-1. Semiconductor Lead Layouts	5
3-2. Printed Wiring Boards	6
3-3. Schematic Diagram	9
3-4. Circuit Boards Location	12
3-5. IC Block Diagrams	12
4. EXPLODED VIEWS	13
5. ELECTRICAL PARTS LIST	15

MODEL IDENTIFICATION

- Specification Label -



US Model : AC : 120V 60Hz 250W

Canadian Model : AC : 120V 60Hz 370VA

E Model : AC : 120/220/240V~50/60Hz 265W

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

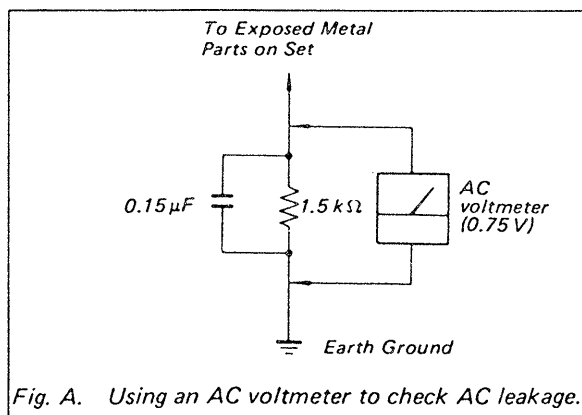


Fig. A. Using an AC voltmeter to check AC leakage.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

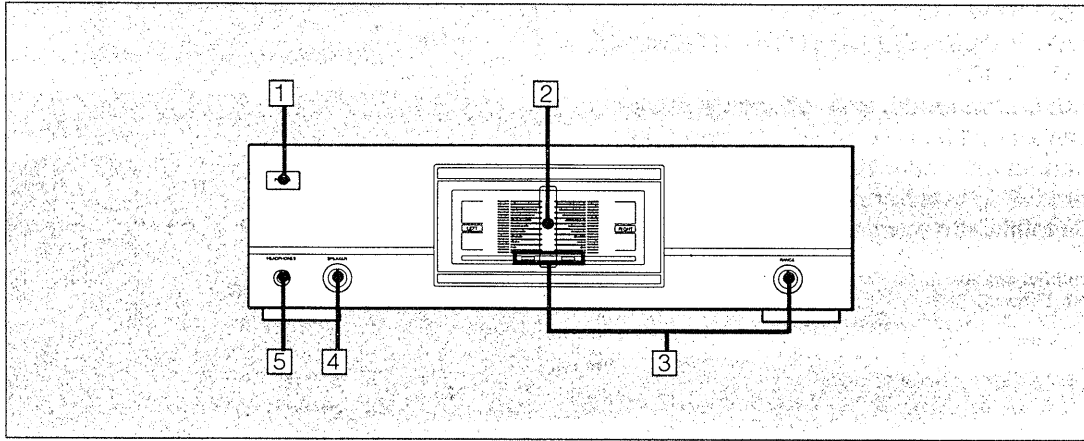
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE Δ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1

GENERAL

This section is extracted from instruction manual.

Function of Controls



1 POWER switch

Press to turn ON or OFF the unit.

To control the power of the unit with the power switch (SYSTEM POWER) of the AV control amplifier, connect the power cord of the unit to the switched AC outlet of the AV control amplifier and usually set the POWER switch of the unit to ON.

2 Peak power meters

Indicate the peak power levels of the LEFT and RIGHT channels independently.

3 RANGE selector and indicators

Select the range of the peak power meters:

x1: Peak power level is indicated by the scales (for use when listening at the high volume level).

x1/10: Peak power level is indicated by 1/10 of the scales (for use when listening at the low volume level).

4 SPEAKERS selector

Select the speaker system to be used.

A: To drive speaker system A.


B: To drive speaker system B.

A+B: To drive both speaker systems A and B.

OFF: For headphones listening only.

Notes

- Speaker systems A and B are series connected. No sound can be heard if the SPEAKERS selector is set to A+B when only one speaker system is connected.
- The sound of the rear (surround) or center (Dolby* Pro Logic) speakers can be heard only when surround mode is selected on the AV control amplifier.

* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792, and 3,959,590. Canadian numbers 1,004,603 and 1,037,887. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

5 HEADPHONES jack (stereo phone jack)

Connect headphones for listening the sound of front speakers.

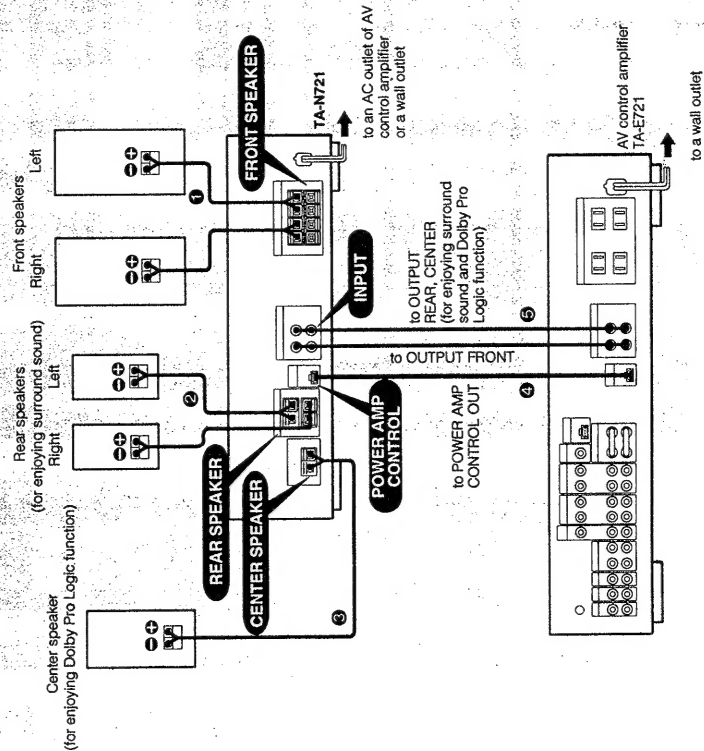
Notes

- After setting the volume level to minimum on the AV control amplifier, connect headphones.
- The sound of rear and center speakers cannot be heard from headphones.
- When using headphones, set the SPEAKERS selector on the front panel and the surround mode switch on the AV control amplifier to off so that sound may not be output from the front, rear, or center speakers.

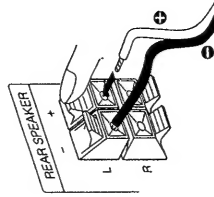
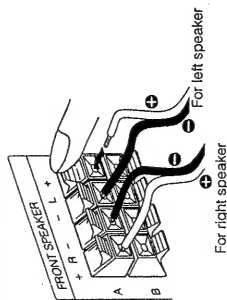
Connections

- Connect the AC power cord last. Make sure power is off.
- Cord plugs and jacks are color coded. Red plugs and jacks are for right channel (R) of the FRONT INPUT terminals and white ones for left channel (L) of that terminals. And also, red plugs and jacks are for REAR terminal and white ones for CENTER terminal.
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- The + and - cords of the speaker systems should be correctly connected to the + and - terminals of the amplifier respectively.

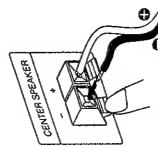
The numbers correspond to the following details.



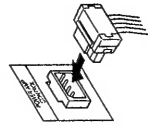
- 1 Front speaker cords**
You can connect two pairs of speaker systems: system A and system B. They can be selected individually or simultaneously with the selector on the front panel.



- 2 Center speaker cords**
Connect one center speaker system for enjoying Dolby Pro Logic function.



- 3 Power amplifier control cord (not supplied)**
Connect to the POWER AMP CONTROL OUT jack of the AV control amplifier TA-E721 with the control cord.



Push in until it clicks.

To disconnect, pull it out by grasping both sides of the plug.

- 4 Audio connection cords (not supplied)**
TA-N721 has one REAR INPUT terminal to drive rear speakers, and a CENTER INPUT terminal to drive center speaker. Connect to the REAR OUTPUT and CENTER OUTPUT terminals of TA-E721 (AV control amplifier) with audio connection cords. (Red colored cord for connection of REAR INPUT terminal on the unit and REAR OUTPUT terminal on the AV control amplifier, and white colored cord for CENTER INPUT and OUTPUT terminals on each unit.)

SECTION 2 ELECTRICAL MEASUREMENTS

DC Bias Measurement

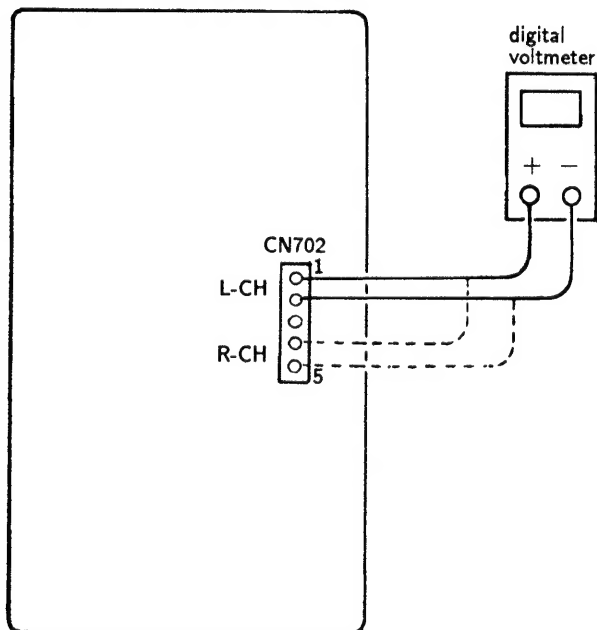
Note : Measure the idling voltage after tuning the unit on for about 10 minutes, giving it time to warm up.

Procedure :

1. Connect the digital voltmeter to CN702 on main board as shown in below drawing.
2. Measure the idling voltage so that the digital voltmeter on signal reads 0.2 - 6mV CN702 LCH and RCH. (with no signal input)

Measurement Location :

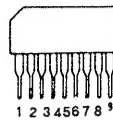
MAIN BOARD (component side)



SECTION 3 DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUTS

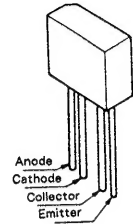
IRE31A



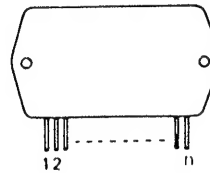
2SA1215M-OPY
2SC2921M-OPY



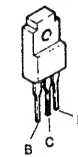
RBA-402



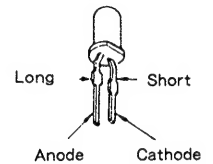
STK4162MK2



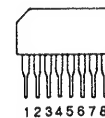
2SA1684-LK
2SC4431



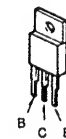
SEL2210R-D



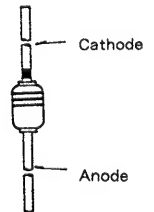
μPC1237HA



2SD2012



UZL-15H



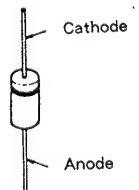
2SA979-FG



D300

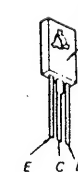


IN4148M

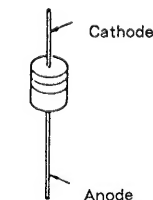


2SA1142
2SC2682

LETTER SIDE



HZS6B1L



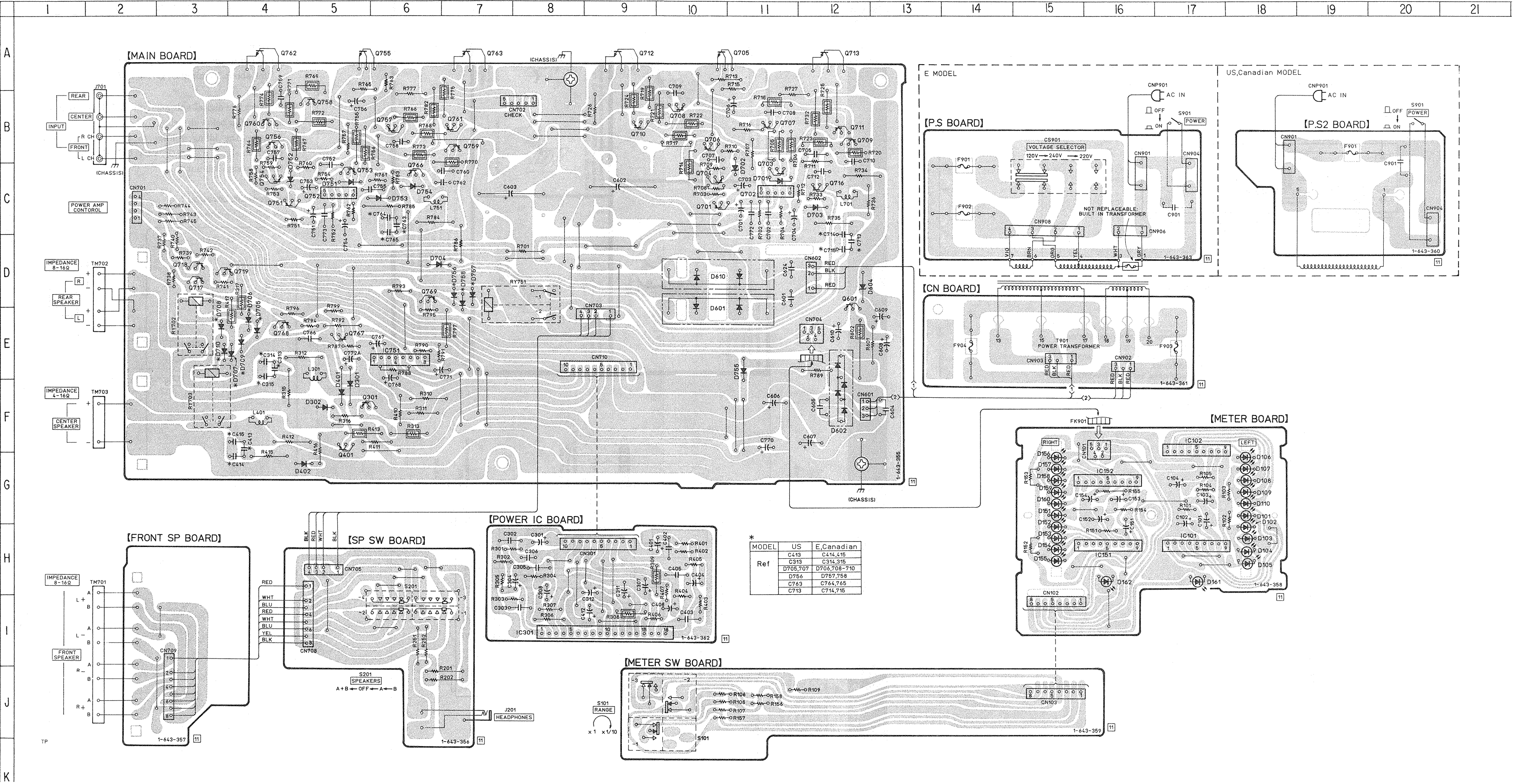
3-2. PRINTED WIRING BOARDS •See page 5 for Semiconductor Lead Layouts. •See page 12 for circuit Boards Locations.

• Semiconductor Location

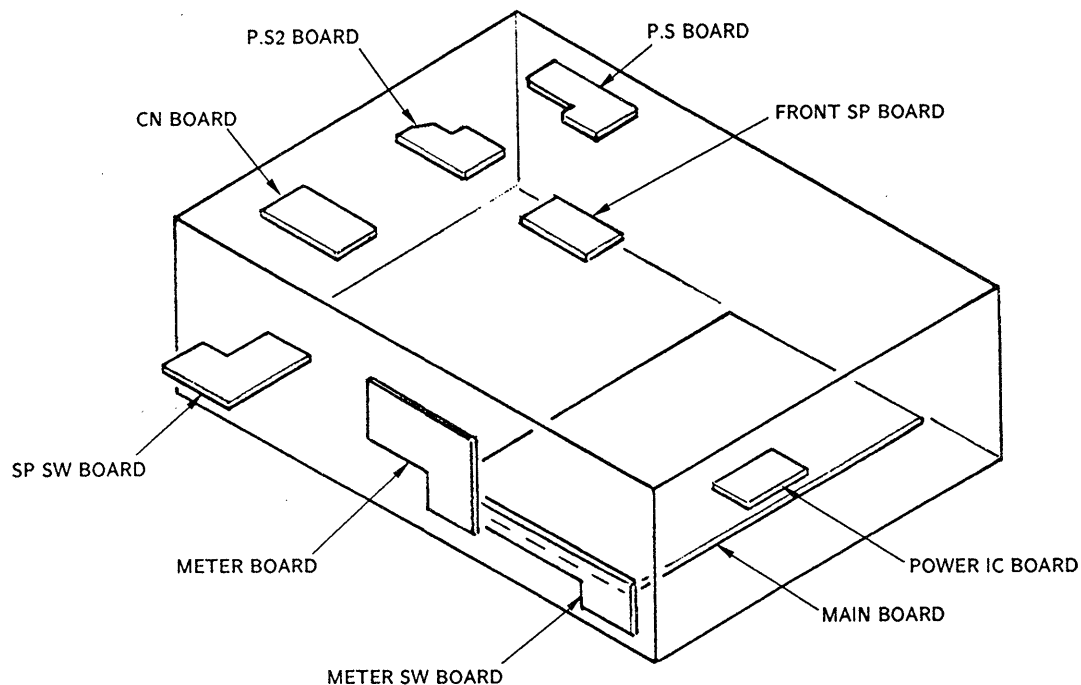
Ref. No.	Location	Ref. No.	Location
D101	G-18	D758	D-7
D102	H-18		
D103	H-18	IC101	H-17
D104	H-18	IC102	F-17
D105	H-18	IC151	H-16
D106	G-18	IC152	G-16
D107	G-18	IC301	I-8
D108	G-18	IC751	E-6
D109	G-18		
D110	G-18	Q301	F-5
D151	G-15	Q401	F-5
D152	H-15	Q601	F-12
D153	H-15	Q701	C-10
D154	H-15	Q702	C-11
D155	H-15	Q703	C-11
D156	G-15	Q704	C-10
D157	G-15	Q705	A-10
D158	G-15	Q706	B-10
D159	G-15	Q707	B-11
D160	G-15	Q708	B-10
D161	H-17	Q709	B-12
D162	H-16	Q710	B-9
D301	F-5	Q711	B-12
D302	F-5	Q712	A-9
D401	F-5	Q713	A-12
D402	G-5	Q716	C-12
D601	E-10	Q717	D-3
D602	F-12	Q718	D-3
D604	D-12	Q719	D-3
D610	D-10	Q751	C-4
D701	C-11	Q752	C-5
D702	C-11	Q753	C-5
D703	C-12	Q754	C-4
D704	D-6	Q755	A-5
D705	E-4	Q756	B-4
D706	E-4	Q757	B-6
D707	E-4	Q758	B-5
D708	E-3	Q759	B-7
D709	E-4	Q760	B-4
D710	E-3	Q761	B-7
D751	C-5	Q762	A-4
D752	C-4	Q763	A-7
D753	C-6	Q766	C-6
D754	C-6	Q767	E-5
D755	E-11	Q768	E-4
D756	D-7	Q769	D-6
D757	D-7		

Note on PRINTED WIRING BOARDS

- : Parts extracted from the component side.
- : Jumper wire connected to the ground pattern on the component side.
- : Pattern on the side which is seen.

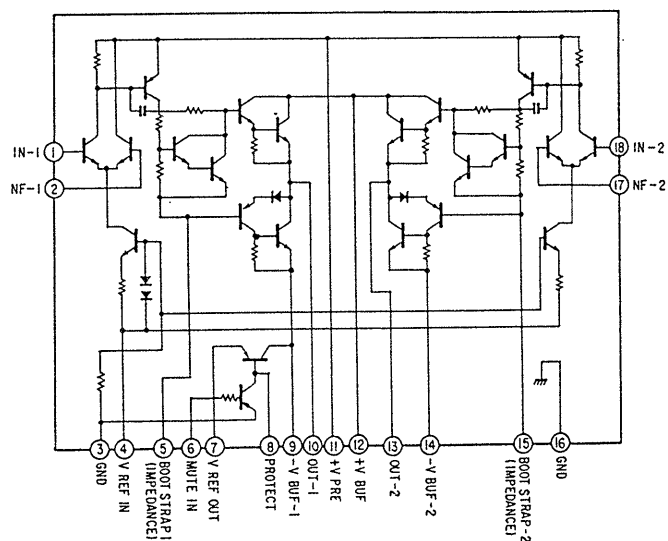


3-4. CIRCUIT BOARDS LOCATION

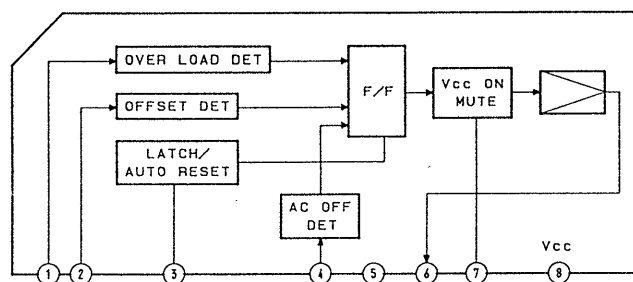


3-5. IC BLOCK DIAGRAMS

● IC301 STK-4162MK2



● IC751 UPC1237HA






EXPLODED VIEWS

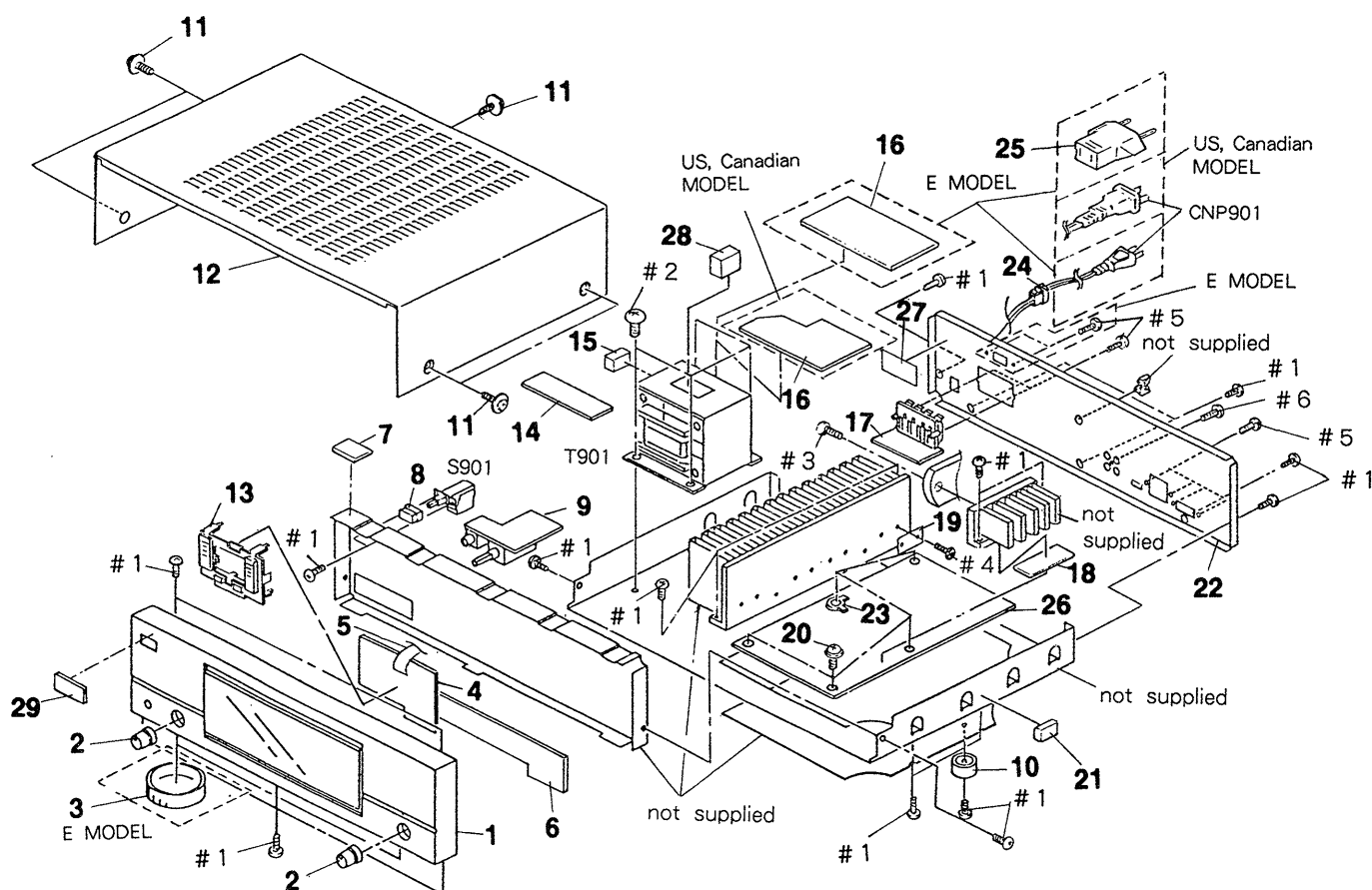
NOTE:

- Parts color Cabinet's color

- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spéci-fie.



Ref. No.	Part No.	Description	Remark
1	X-4942-292-1	PANEL ASSY, FRONT (US, Canadian)	
1	X-4942-293-1	PANEL ASSY, FRONT (E)	
2	4-943-420-11	KNOB (DIA. 19)	
* 3	4-929-030-11	RING (DIA. 58A), ORNAMENTAL (E)	
* 4	1-643-358-11	METER, BOARD	
5	1-575-662-11	WIRE, FLAT TYPE (5 CORE)	
* 6	1-643-359-11	METER SW, BOARD	
7	9-911-841-XX	CUSHION	
8	3-354-912-01	KNOB, POWER	
* 9	1-643-356-11	SP, SW BOARD	
10	4-933-601-01	FOOT	
11	3-704-366-01	SCREW (CASE) (M3X8)	
* 12	4-924-920-71	CASE	
* 13	4-945-827-01	HOLDER, LED	
* 14	1-643-361-11	CN BOARD	
* 15	3-720-698-01	SPACER (SMALL), NA	
* 16	1-643-363-11	P, S BOARD (E)	
* 16	1-643-360-11	P, S 2 BOARD (US, Canadian)	
* 17	1-643-357-11	FRONT SP, BOARD	
* 18	A-4347-313-A	POWER IC BOARD, COMPLETE (US)	
* 18	A-4347-320-A	POWER IC BOARD, COMPLETE (Canadian)	
* 18	A-4347-323-A	POWER IC BOARD, COMPLETE (E)	

Ref. No.	Part No.	Description	Remark
19	4-885-901-31	SHEET, RADIATION	
20	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6	
21	9-911-840-XX	CUSHION	
* 22	4-949-956-01	PANEL, BACK (US)	
* 22	4-949-956-11	PANEL, BACK (E)	
* 22	4-949-956-21	PANEL, BACK (Canadian)	
* 23	4-942-204-01	PLATE, GRAND	
* 24	3-703-244-00	BUSHING (2104), CORD (US, Canadian)	
* 24	3-703-571-11	BUSHING (S) (4516), CORD (E)	
△25	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
* 26	A-4347-311-A	MAIN BOARD, COMPLETE (US)	
* 26	A-4347-319-A	MAIN BOARD, COMPLETE (Canadian)	
* 26	A-4347-321-A	MAIN BOARD, COMPLETE (E)	
* 27	3-703-044-26	LABEL, CAUTION (US, Canadian)	
28	9-911-843-XX	CUSHION	
29	4-925-334-11	EMBLEM (5-A), SONY (E)	
△CNP901	1-574-902-11	CORD, POWER (E)	
△CNP901	1-590-771-11	CORD, POWER (US, Canadian)	
△S901	1-554-538-00	SWITCH, PUSH (AC POWER) (1 KEY)	
△T901	1-450-803-11	TRANSFORMER, POWER (US)	
△T901	1-450-804-11	TRANSFORMER, POWER (E)	
△T901	1-450-829-11	TRANSFORMER, POWER (Canadian)	

SECTION 5

ELECTRICAL PARTS LIST

CN	MAIN
----	------

NOTE:

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...
- CAPACITORS:
uF: μ F
- COILS
uH: μ H

Ref. No.	Part No.	Description	Remark
*	1-643-361-11	CN BOARD *****	
		< FUSE >	
Δ F903	1-532-350-00	FUSE 4A 250V (E)	
Δ F903	1-576-108-11	FUSE 4A 125V (US, Canadian)	
Δ F904	1-532-350-00	FUSE 4A 250V (E)	
Δ F904	1-576-108-11	FUSE 4A 125V (US, Canadian)	

*	A-4347-311-A	MAIN BOARD, COMPLETE (US)	
*	A-4347-319-A	MAIN BOARD, COMPLETE (Canadian)	
*	A-4347-321-A	MAIN BOARD, COMPLETE (E)	

*	4-942-204-01	PLATE, GROUND	
*	4-945-829-01	HOLDER, LED	
		< CAPACITOR >	
C313	1-130-489-00	MYLAR 0.033uF 5% 50V (US)	
C314	1-130-493-00	MYLAR 0.068uF 5% 50V(Canadian, E)	
C315	1-130-493-00	MYLAR 0.068uF 5% 50V(Canadian, E)	
C413	1-130-489-00	MYLAR 0.033uF 5% 50V (US)	
C414	1-130-493-00	MYLAR 0.068uF 5% 50V(Canadian, E)	
C415	1-130-493-00	MYLAR 0.068uF 5% 50V(Canadian, E)	
C601	1-106-367-00	MYLAR 0.01uF 5% 200V	
C602	1-125-573-11	ELECT (BLOCK) 12000uF 20% 71V	
C603	1-125-573-11	ELECT (BLOCK) 12000uF 20% 71V	
C604	1-106-367-00	MYLAR 0.01uF 5% 200V	
C605	1-106-367-00	MYLAR 0.01uF 5% 200V	
C606	1-126-860-11	ELECT 3300uF 20% 35V	
C607	1-126-860-11	ELECT 3300uF 20% 35V	
C608	1-124-478-11	ELECT 100uF 20% 25V	
C609	1-124-477-11	ELECT 47uF 20% 25V	
C610	1-124-477-11	ELECT 47uF 20% 25V	

Ref. No.	Part No.	Description	Remark
C624	1-106-367-00	MYLAR 0.01uF 5% 200V	
C701	1-124-927-11	ELECT 4.7uF 20% 100V	
C702	1-162-292-31	CERAMIC 680PF 10% 50V	
C703	1-126-750-11	ELECT 47uF 20% 25V	
C704	1-124-910-11	ELECT 47uF 20% 50V	
C705	1-162-197-31	CERAMIC 6.8PF 10% 50V	
C706	1-126-750-11	ELECT 47uF 20% 25V	
C707	1-161-959-00	CERAMIC 22PF 10% 500V	
C708	1-161-959-00	CERAMIC 22PF 10% 500V	
C709	1-130-483-00	MYLAR 0.01uF 5% 50V	
C710	1-130-483-00	MYLAR 0.01uF 5% 50V	
C712	1-130-495-00	MYLAR 0.1uF 5% 50V	
C713	1-130-489-00	MYLAR 0.033uF 5% 50V (US)	
C714	1-130-493-00	MYLAR 0.068uF 5% 50V(Canadian, E)	
C715	1-130-493-00	MYLAR 0.068uF 5% 50V(Canadian, E)	
C751	1-124-927-11	ELECT 4.7uF 20% 100V	
C752	1-162-292-31	CERAMIC 680PF 10% 50V	
C753	1-126-750-11	ELECT 47uF 20% 25V	
C754	1-124-910-11	ELECT 47uF 20% 50V	
C755	1-162-197-31	CERAMIC 6.8PF 10% 50V	
C756	1-126-750-11	ELECT 47uF 20% 25V	
C757	1-161-959-00	CERAMIC 22PF 10% 500V	
C758	1-161-959-00	CERAMIC 22PF 10% 500V	
C759	1-130-483-00	MYLAR 0.01uF 5% 50V	
C760	1-130-483-00	MYLAR 0.01uF 5% 50V	
C762	1-130-495-00	MYLAR 0.1uF 5% 50V	
C763	1-130-489-00	MYLAR 0.033uF 5% 50V (US)	
C764	1-130-493-00	MYLAR 0.068uF 5% 50V(Canadian, E)	
C765	1-130-493-00	MYLAR 0.068uF 5% 50V(Canadian, E)	
C766	1-161-494-00	CERAMIC 0.022uF 25V	
C767	1-124-927-11	ELECT 4.7uF 20% 100V	
C768	1-124-443-00	ELECT 100uF 20% 10V	
C770	1-124-907-11	ELECT 10uF 20% 50V	
C771	1-124-477-11	ELECT 47uF 20% 25V	
C772	1-124-910-11	ELECT 47uF 20% 50V	
C773	1-162-282-31	CERAMIC 100PF 10% 50V	

MAIN

Ref. No.	Part No.	Description	Remark
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< CONNECTOR >

* CN102	1-562-573-11	SOCKET, CONNECTOR 8P	
CN701	1-566-211-11	PIN, CONNECTOR 4P (POWER AMP CONTROL)	
* CN702	1-560-531-00	PIN, CONNECTOR 5P (CHECK PIN)	
* CN704	1-568-824-11	SOCKET, CONNECTOR 5P	
* CN710	1-506-608-11	PIN, CONNECTOR 10P	

< DIODE >

D301	8-719-815-85	DIODE	1S1585
D302	8-719-815-85	DIODE	1S1585
D401	8-719-815-85	DIODE	1S1585
D402	8-719-815-85	DIODE	1S1585
D601	8-719-200-80	DIODE	D300
D602	8-719-312-09	DIODE	RBA-402
D604	8-719-001-94	DIODE	UZL-15H
D610	8-719-200-80	DIODE	D300
D701	8-719-987-63	DIODE	1N4148M
D702	8-719-933-36	DIODE	HZS6B1L
D703	8-719-815-85	DIODE	1S1585
D704	8-719-815-85	DIODE	1S1585
D705	8-719-987-63	DIODE	1N4148M (US)
D706	8-719-987-63	DIODE	1N4148M (Canadian, E)
D707	8-719-987-63	DIODE	1N4148M (US)
D708	8-719-987-63	DIODE	1N4148M (Canadian, E)
D709	8-719-987-63	DIODE	1N4148M (Canadian, E)
D710	8-719-987-63	DIODE	1N4148M (Canadian, E)
D751	8-719-987-63	DIODE	1N4148M
D752	8-719-933-36	DIODE	HZS6B1L
D753	8-719-815-85	DIODE	1S1585
D754	8-719-815-85	DIODE	1S1585
D755	8-719-815-85	DIODE	1S1585
D756	8-719-987-63	DIODE	1N4148M (US)
D757	8-719-987-63	DIODE	1N4148M (Canadian, E)
D758	8-719-987-63	DIODE	1N4148M (Canadian, E)

< IC >

IC751	8-759-111-68	IC	uPC1237HA
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< JACK >

J701	1-565-258-11	JACK, PIN 4P (INPUT)	
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< COIL >

L301	1-420-872-00	COIL, AIR CORE	
L401	1-420-872-00	COIL, AIR CORE	
L701	1-420-872-00	COIL, AIR CORE	
L751	1-420-872-00	COIL, AIR CORE	

Ref. No.	Part No.	Description	Remark
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< TRANSISTOR >

Q301	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
Q401	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
Q601	8-729-209-15	TRANSISTOR	2SD2012
Q701	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q702	8-729-620-18	TRANSISTOR	2SA979-FG
Q703	8-729-620-05	TRANSISTOR	2SC2603-EF
Q704	8-729-620-05	TRANSISTOR	2SC2603-EF
Q705	8-729-209-15	TRANSISTOR	2SD2012
Q706	8-729-141-06	TRANSISTOR	2SA1142-QPE
Q707	8-729-141-05	TRANSISTOR	2SC2682-QPE
Q708	8-729-620-05	TRANSISTOR	2SC2603-EF
Q709	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q710	8-729-141-46	TRANSISTOR	2SC4431-LK
Q711	8-729-141-37	TRANSISTOR	2SA1684-LK
Q712	8-729-320-97	TRANSISTOR	2SC2921M
Q713	8-729-010-96	TRANSISTOR	2SA1215M-OPY
Q716	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
Q717	8-729-620-05	TRANSISTOR	2SC2603-EF
Q718	8-729-620-05	TRANSISTOR	2SC2603-EF
Q719	8-729-620-05	TRANSISTOR	2SC2603-EF
Q751	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
Q752	8-729-620-18	TRANSISTOR	2SA979-FG
Q753	8-729-620-05	TRANSISTOR	2SC2603-EF
Q754	8-729-620-05	TRANSISTOR	2SC2603-EF
Q755	8-729-209-15	TRANSISTOR	2SD2012
Q756	8-729-141-06	TRANSISTOR	2SA1142-QPE
Q757	8-729-141-05	TRANSISTOR	2SC2682-QPE
Q758	8-729-620-05	TRANSISTOR	2SC2603-EF
Q759	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q760	8-729-141-46	TRANSISTOR	2SC4431-LK
Q761	8-729-141-37	TRANSISTOR	2SA1684-LK
Q762	8-729-320-97	TRANSISTOR	2SC2921M
Q763	8-729-010-96	TRANSISTOR	2SA1215M-OPY
Q766	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
Q767	8-729-900-63	TRANSISTOR	DTA124ES
Q768	8-729-119-76	TRANSISTOR	2SA1175-HFE
Q769	8-729-119-76	TRANSISTOR	2SA1175-HFE

< RESISTOR >

R310	1-249-437-11	CARBON	47K	5%	1/4W
R311	1-217-611-00	RES, METAL PLATE	0.1		
R312	1-260-072-11	CARBON	4.7	5%	1/2W
△ R313	1-247-704-11	CARBON	220	5%	1/4W
R315	1-260-076-11	CARBON	10	5%	1/2W
R316	1-249-428-11	CARBON	8.2K	5%	1/4W

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN

Ref. No.	Part No.	Description			Remark
R317	1-247-704-11	CARBON	220	5%	1/4W
R410	1-249-438-11	CARBON	56K	5%	1/4W
R411	1-217-611-00	RES, METAL PLATE	0.1		
R412	1-260-072-11	CARBON	4.7	5%	1/2W
△R413	1-247-704-11	CARBON	220	5%	1/4W
R415	1-260-076-11	CARBON	10	5%	1/2W
R416	1-249-428-11	CARBON	8.2K	5%	1/4W
△R417	1-247-704-11	CARBON	220	5%	1/4W
R601	1-249-423-11	CARBON	3.3K	5%	1/4W
△R602	1-215-909-11	METAL OXIDE	47	5%	3W F
R701	1-249-417-11	CARBON	1K	5%	1/4W
R702	1-249-435-11	CARBON	33K	5%	1/4W
R703	1-249-421-11	CARBON	2.2K	5%	1/4W
R704	1-249-411-11	CARBON	330	5%	1/4W
△R705	1-247-704-11	CARBON	220	5%	1/4W
△R706	1-247-704-11	CARBON	220	5%	1/4W
R707	1-249-438-11	CARBON	56K	5%	1/4W
R708	1-249-429-11	CARBON	10K	5%	1/4W
R709	1-249-435-11	CARBON	33K	5%	1/4W
R710	1-249-426-11	CARBON	5.6K	5%	1/4W
R711	1-249-435-11	CARBON	33K	5%	1/4W
R712	1-247-830-11	CARBON	910	5%	1/4W
R713	1-249-412-11	CARBON	390	5%	1/4W
△R714	1-247-692-11	CARBON	22	5%	1/4W
R715	1-247-832-11	CARBON	1.1K	5%	1/4W
△R716	1-247-692-11	CARBON	22	5%	1/4W
△R717	1-247-700-11	CARBON	100	5%	1/4W
△R718	1-247-700-11	CARBON	100	5%	1/4W
△R719	1-247-713-11	CARBON	1K	5%	1/4W
△R720	1-247-713-11	CARBON	1K	5%	1/4W
△R721	1-247-719-11	CARBON	3.3K	5%	1/4W
△R722	1-247-745-11	CARBON	330	5%	1/2W
△R723	1-247-717-11	CARBON	2.2K	5%	1/4W
△R724	1-249-455-11	CARBON	4.7	5%	1/4W
△R725	1-249-455-11	CARBON	4.7	5%	1/4W
R726	1-214-789-00	RES, METAL PLATE	0.1		
R727	1-214-789-00	RES, METAL PLATE	0.1		
△R732	1-247-702-11	CARBON	150	5%	1/4W
R733	1-249-429-11	CARBON	10K	5%	1/4W
R734	1-260-076-11	CARBON	10	5%	1/2W
R735	1-260-076-11	CARBON	10	5%	1/2W
R736	1-249-437-11	CARBON	47K	5%	1/4W
R737	1-249-425-11	CARBON	4.7K	5%	1/4W
R738	1-249-425-11	CARBON	4.7K	5%	1/4W
R739	1-249-425-11	CARBON	4.7K	5%	1/4W
R740	1-249-425-11	CARBON	4.7K	5%	1/4W
R741	1-249-425-11	CARBON	4.7K	5%	1/4W
R742	1-249-425-11	CARBON	4.7K	5%	1/4W
R743	1-249-428-11	CARBON	8.2K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R744	1-249-428-11	CARBON	8.2K	5%	1/4W
R745	1-249-428-11	CARBON	8.2K	5%	1/4W
R751	1-249-417-11	CARBON	1K	5%	1/4W
R752	1-249-435-11	CARBON	33K	5%	1/4W
R753	1-249-421-11	CARBON	2.2K	5%	1/4W
R754	1-249-411-11	CARBON	330	5%	1/4W
△R755	1-247-704-11	CARBON	220	5%	1/4W
△R756	1-247-704-11	CARBON	220	5%	1/4W
R757	1-249-438-11	CARBON	56K	5%	1/4W
R758	1-249-429-11	CARBON	10K	5%	1/4W
R759	1-249-435-11	CARBON	33K	5%	1/4W
R760	1-249-426-11	CARBON	5.6K	5%	1/4W
R761	1-249-435-11	CARBON	33K	5%	1/4W
R762	1-247-830-11	CARBON	910	5%	1/4W
R763	1-249-412-11	CARBON	390	5%	1/4W
△R764	1-247-692-11	CARBON	22	5%	1/4W
R765	1-247-832-11	CARBON	1.1K	5%	1/4W
△R766	1-247-692-11	CARBON	22	5%	1/4W
△R767	1-247-700-11	CARBON	100	5%	1/4W
△R768	1-247-700-11	CARBON	100	5%	1/4W
△R769	1-247-713-11	CARBON	1K	5%	1/4W
△R770	1-247-713-11	CARBON	1K	5%	1/4W
△R771	1-247-719-11	CARBON	3.3K	5%	1/4W
△R772	1-247-745-11	CARBON	330	5%	1/2W
△R773	1-247-717-11	CARBON	2.2K	5%	1/4W
△R774	1-249-455-11	CARBON	4.7	5%	1/4W
△R775	1-249-455-11	CARBON	4.7	5%	1/4W
R776	1-214-789-00	RES, METAL PLATE	0.1		
R777	1-214-789-00	RES, METAL PLATE	0.1		
△R782	1-247-702-11	CARBON	150	5%	1/4W
R783	1-249-429-11	CARBON	10K	5%	1/4W
R784	1-260-076-11	CARBON	10	5%	1/2W
R785	1-260-076-11	CARBON	10	5%	1/2W
R786	1-249-438-11	CARBON	56K	5%	1/4W
R787	1-249-437-11	CARBON	47K	5%	1/4W
R788	1-249-441-11	CARBON	100K	5%	1/4W
R789	1-249-430-11	CARBON	12K	5%	1/4W
R790	1-249-438-11	CARBON	56K	5%	1/4W
R791	1-249-428-11	CARBON	8.2K	5%	1/4W
R792	1-249-429-11	CARBON	10K	5%	1/4W
R793	1-249-429-11	CARBON	10K	5%	1/4W
R794	1-249-429-11	CARBON	10K	5%	1/4W
R795	1-249-429-11	CARBON	10K	5%	1/4W
R796	1-249-399-11	CARBON	33	5%	1/4W
△R797	1-247-741-11	CARBON	150	5%	1/2W F
R799	1-249-421-11	CARBON	2.2K	5%	1/4W

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MAIN

METER

METER SW

Ref. No.	Part No.	Description	Remark
< RELAY >			
RY702	1-515-790-11	RELAY (REAR SP)	
RY703	1-515-790-11	RELAY (CENTER SP)	
RY751	1-515-356-00	RELAY (FRONT SP)	
< TERMINAL >			
* TM702	1-537-240-41	TERMINAL BOARD (CHECKER PIN)	
TM703	1-536-707-21	TERMINAL BOARD, PUSH 2P	

* 1-643-358-11	METER BOARD	*****	
< CAPACITOR >			
C101	1-126-163-11	ELECT 4.7uF 20% 50V	
C102	1-124-261-00	ELECT 10uF 20% 50V	
C103	1-126-163-11	ELECT 4.7uF 20% 50V	
C104	1-124-261-00	ELECT 10uF 20% 50V	
C151	1-126-163-11	ELECT 4.7uF 20% 50V	
C152	1-124-261-00	ELECT 10uF 20% 50V	
C153	1-126-163-11	ELECT 4.7uF 20% 50V	
C154	1-124-261-00	ELECT 10uF 20% 50V	
< CONNECTOR >			
* CN101	1-568-848-11	SOCKET, CONNECTOR 5P	
< DIODE >			
D101	8-719-304-78	DIODE SEL2210R-D	
D102	8-719-304-78	DIODE SEL2210R-D	
D103	8-719-304-78	DIODE SEL2210R-D	
D104	8-719-304-78	DIODE SEL2210R-D	
D105	8-719-304-78	DIODE SEL2210R-D	
D106	8-719-304-78	DIODE SEL2210R-D	
D107	8-719-304-78	DIODE SEL2210R-D	
D108	8-719-304-78	DIODE SEL2210R-D	
D109	8-719-304-78	DIODE SEL2210R-D	
D110	8-719-304-78	DIODE SEL2210R-D	
D151	8-719-304-78	DIODE SEL2210R-D	
D152	8-719-304-78	DIODE SEL2210R-D	
D153	8-719-304-78	DIODE SEL2210R-D	
D154	8-719-304-78	DIODE SEL2210R-D	
D155	8-719-304-78	DIODE SEL2210R-D	
D156	8-719-304-78	DIODE SEL2210R-D	
D157	8-719-304-78	DIODE SEL2210R-D	
D158	8-719-304-78	DIODE SEL2210R-D	
D159	8-719-304-78	DIODE SEL2210R-D	
D160	8-719-304-78	DIODE SEL2210R-D	

Ref. No.	Part No.	Description	Remark
D161	8-719-304-78	DIODE SEL2210R-D	
D162	8-719-304-78	DIODE SEL2210R-D	
< IC >			
IC101	8-759-917-42	IC IR2E31A	
IC102	8-759-917-42	IC IR2E31A	
IC151	8-759-917-42	IC IR2E31A	
IC152	8-759-917-42	IC IR2E31A	
< RESISTOR >			
R101	1-249-441-11	CARBON 100K 5% 1/4W	
R102	1-249-407-11	CARBON 150 5% 1/4W	
R103	1-249-407-11	CARBON 150 5% 1/4W	
R104	1-249-440-11	CARBON 82K 5% 1/4W	
R105	1-249-429-11	CARBON 10K 5% 1/4W	
R151	1-249-441-11	CARBON 100K 5% 1/4W	
R152	1-249-407-11	CARBON 150 5% 1/4W	
R153	1-249-407-11	CARBON 150 5% 1/4W	
R154	1-249-440-11	CARBON 82K 5% 1/4W	
R155	1-249-429-11	CARBON 10K 5% 1/4W	

* 1-643-359-11	METER SW BOARD	*****	
< CONNECTOR >			
* CN103	1-564-599-11	PIN, CONNECTOR 8P	
< RESISTOR >			
R106	1-249-433-11	CARBON 22K 5% 1/4W	
R107	1-249-417-11	CARBON 1K 5% 1/4W	
R108	1-249-427-11	CARBON 6.8K 5% 1/4W	
R109	1-249-416-11	CARBON 820 5% 1/4W	
R156	1-249-433-11	CARBON 22K 5% 1/4W	
R157	1-249-417-11	CARBON 1K 5% 1/4W	
R158	1-249-427-11	CARBON 6.8K 5% 1/4W	
< SWITCH >			
S101	1-572-816-11	SWITCH, ROTARY (RANGE)	

POWER

P.S 2

P.S

SP SW

Ref. No.	Part No.	Description	Remark
*	A-4347-313-A	POWER IC BOARD, COMPLETE (US)	
*	A-4347-320-A	POWER IC BOARD, COMPLETE (Canadian)	
*	A-4347-323-A	POWER IC BOARD, COMPLETE (E)	

< CAPACITOR >			
C301	1-124-927-11	ELECT 4.7uF 20% 100V	
C302	1-162-282-31	CERAMIC 100PF 10% 50V	
C303	1-162-287-31	CERAMIC 270PF 10% 50V	
C304	1-124-910-11	ELECT 47uF 20% 50V	
C305	1-162-195-31	CERAMIC 4.7PF 10% 50V	
C306	1-130-491-00	MYLAR 0.047uF 5% 50V	
C307	1-124-917-11	ELECT 33uF 20% 63V	
C308	1-124-910-11	ELECT 47uF 20% 50V	
C311	1-124-917-11	ELECT 33uF 20% 63V	
C312	1-124-907-11	ELECT 10uF 20% 50V	
C401	1-124-927-11	ELECT 4.7uF 20% 100V	
C402	1-162-282-31	CERAMIC 100PF 10% 50V	
C403	1-162-287-31	CERAMIC 270PF 10% 50V	
C404	1-124-910-11	ELECT 47uF 20% 50V	
C405	1-162-195-31	CERAMIC 4.7PF 10% 50V	
C408	1-124-910-11	ELECT 47uF 20% 50V	
C412	1-124-907-11	ELECT 10uF 20% 50V	
< CONNECTOR >			
* CN301	1-562-334-00	SOCKET, CONNECTOR 10P	
< IC >			
IC301	8-749-900-24	IC STK-4162MK2	
< RESISTOR >			
R301	1-249-417-11	CARBON 1K 5% 1/4W	
R302	1-249-438-11	CARBON 56K 5% 1/4W	
R303	1-249-417-11	CARBON 1K 5% 1/4W	
R304	1-249-438-11	CARBON 56K 5% 1/4W	
R305	1-249-417-11	CARBON 1K 5% 1/4W	
R306	1-249-421-11	CARBON 2.2K 5% 1/4W	
R307	1-249-421-11	CARBON 2.2K 5% 1/4W	
R308	1-247-700-11	CARBON 100 5% 1/4W	
R309	1-247-700-11	CARBON 100 5% 1/4W	
R401	1-249-417-11	CARBON 1K 5% 1/4W	
R402	1-249-438-11	CARBON 56K 5% 1/4W	
R403	1-249-417-11	CARBON 1K 5% 1/4W	
R404	1-249-438-11	CARBON 56K 5% 1/4W	
R405	1-249-417-11	CARBON 1K 5% 1/4W	
R406	1-249-421-11	CARBON 2.2K 5% 1/4W	
R407	1-249-421-11	CARBON 2.2K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
*	1-643-360-11	P.S 2 BOARD (US, Canadian)	

	1-533-225-11	HOLDER, FUSE	
< CAPACITOR >			
△C901	1-161-744-00	CERAMIC 0.01uF 400V	
< CONNECTOR >			
* CN901	1-564-321-00	PIN, CONNECTOR 2P	
* CN904	1-564-321-21	PIN, CONNECTOR 2P	
< FUSE >			
△F901	1-532-749-11	FUSE GLASS TUBE 8A 125V (US, Canadian)	

*	1-643-363-11	P.S BOARD (E)	

	1-533-225-11	HOLDER, FUSE	
< CAPACITOR >			
△C901	1-161-744-00	CERAMIC 0.01uF 400V	
< CONNECTOR >			
* CN901	1-564-321-00	PIN, CONNECTOR 2P	
* CN904	1-564-321-21	PIN, CONNECTOR 2P	
* CN906	1-564-321-00	PIN, CONNECTOR 2P (E)	
△CN908	1-568-106-11	PIN, CONNECTOR 4P (E)	
< VOLTAGE SELECTOR >			
△CS901	1-572-009-11	SELECTOR, VOLTAGE (E)	
< FUSE >			
△F901	1-532-350-00	FUSE 4A 250V (E)	
△F902	1-532-350-00	FUSE 4A 250V (E)	

*	1-643-356-11	SP. SW BOARD	

*	1-643-357-11	FRONT SP BOARD	

< JACK >			
J201	1-563-347-11	JACK, LARGE TYPE (HEADPHONES)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SP SW

Ref. No.	Part No.	Description	Remark
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< RESISTOR >

R201	1-260-100-11	CARBON	1.2K 5% 1/2W
R202	1-260-100-11	CARBON	1.2K 5% 1/2W
R251	1-260-100-11	CARBON	1.2K 5% 1/2W
R252	1-260-100-11	CARBON	1.2K 5% 1/2W

< SWITCH >

S201	1-572-812-11	SWITCH, ROTARY SLIDE (SPEAKERS)	
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< TERMINAL >

TM701	1-537-376-11	TERMINAL BOARD (SP)	
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MISCELLANEOUS

5	1-575-662-11	WIRE, FLAT TYPE (5 CORE)	
* 16	1-643-360-11	P, S2 BOARD (US, Canadian)	
△25	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
△CNP901	1-574-902-11	CORD, POWER (E)	
△CNP901	1-590-771-11	CORD, POWER (US, Canadian)	
△S901	1-554-538-00	SWITCH, PUSH (AC POWER) (1 KEY)	
△T901	1-450-803-11	TRANSFORMER, POWER (US)	
△T901	1-450-804-11	TRANSFORMER, POWER (E)	
△T901	1-450-829-11	TRANSFORMER, POWER (Canadian)	

ACCESSORIES & PACKING MATERIALS

	3-703-710-41	STICKER, SONY SYMBOL (12)	
	3-754-930-11	MANUAL, INSTRUCTION (E, Canadian)	
		(ENGLISH/FRENCH)	
	3-754-930-21	MANUAL, INSTRUCTION (ENGLISH) (US)	
*	4-923-820-01	CUSHION	
*	4-949-874-01	INDIVIDUAL CARTON (US, E)	

HARDWARE LIST

#1	7-682-548-09	SCREW +BVTT 3X8 (S)
#2	7-682-561-04	SCREW +BVTT 4X8 (S)
#3	7-685-650-79	SCREW +BVTP 3X16
#4	7-682-549-09	SCREW +B 3X10
#5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#6	7-621-849-00	SCREW, TAPPING

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